Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity[.];

wherein said transmit opportunities are forward link transmit opportunities transmitted by a base station.

2. (Cancelled)

3. (Cancelled)

4. (Original) A method according to claim 1 wherein the transaction length indicates how many transmit opportunities are required to transmit a respective upper layer packet for the wireless station.

5. (Original) A method according to claim 1 wherein said transmit priority is also a function of a wireless station priority for each wireless station.

6. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity [A method according to claim 1] further comprising:

maintaining a respective measure of how long since each particular wireless station was last allocated a transmit opportunity;

wherein said transmit priority is also a function of how long until a timeout will occur for the respective wireless station.

7. (Currently amended) A method according to claim [5] 6 [further comprising:

maintaining a respective measure of how long since each particular wireless station was last allocated a transmit opportunity;]

wherein said transmit priority is also a function of [how long until a timeout will occur for the respective] a wireless station priority for each wireless station.

8. (Currently amended) A method of selecting one of a plurality of wireless stations to be

allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity;

[A method according to claim 1] wherein said transmit priority is an increasing function of delay and a decreasing function of transaction length.

9. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity;

wherein said transmit priority is also a function of a wireless station priority for

each wireless station;

[A method according to claim 5] wherein said transmit priority is an increasing function of delay, a decreasing function of transaction length, and an increasing function of wireless station priority.

10. (Original) A method according to claim 6 wherein said transmit priority is an increasing function of delay, a decreasing function of transaction length, an increasing function of wireless station priority, and a decreasing function of how long until a timeout will occur for the respective wireless station.

11. (Original) A method according to claim 1 wherein when multiple wireless stations in the group have the highest transmit priority, one of the multiple wireless stations is selected randomly.

12. (Currently amended) A method according to claim [2] 1 further comprising:

queueing transmit units destined for each wireless station in at least one respective queue.

13. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest

transmit priority as the wireless station to be allocated the particular transmit opportunity [A method according to claim 1] wherein selecting the group of wireless stations to compete comprises:

on the basis of each wireless station's rate, determining a next opportunity that each wireless station should compete for;

selecting the group of wireless stations from among those wireless stations whose rate indicates that should compete for the particular opportunity.

14. (Currently amended) A method according to claim [2] 1 wherein selecting the group of wireless stations to compete comprises:

queueing transmit units for each wireless station in either a respective low priority queue or a respective high priority queue;

selecting the group of wireless stations from among those having transmit units in their high priority queue, and if none exist, selecting the group of wireless stations from among those having transmit units in their low priority queue.

15. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest

transmit priority as the wireless station to be allocated the particular transmit opportunity;

[A method according to claim 1] wherein the transmit priority is calculated according to:

$$P_{transmit} = \begin{cases} -1 & dFr > a \\ Highest & dFr = a \\ \left(\frac{dFr}{trSize}\right)\left(1+\left[\frac{1}{a-dFr}-\frac{1}{a}\right]\alpha\right) + MS\,\mathrm{Pr}\,iority & dFr < a \end{cases}$$

where:

trSize is said transaction length;

dFr is said delay parameter;

"a" is a timeout value for a given wireless station which indicates a maximum allowable time which can elapse before the allocation of a transmit opportunity for the wireless station;

MSPriority is any suitable definition of wireless station priority;

α is an accelerator factor towards a higher priority for a given wireless station that has not been selected for a while.

16. (Currently amended) A method according to claim [2] 1 wherein transmit opportunities are slots transmitted as part of superframes, each superframe containing a plurality of transmit slots available for allocation for transmission by one of said wircless stations, and at least one slot which is reserved, the method further comprising:

setting a timeout value for each wireless station indicating a time before which the wireless station must transmit to avoid causing a timeout;

if a timeout value for a particular wireless station will result in the wireless station timing out during a slot which is reserved, resetting the timeout to occur at a slot available for allocation before the reserved slot.

17. (Currently amended) A method of selecting one of a plurality of wireless stations to be allocated a particular transmit opportunity comprising:

maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

selecting a group of said wireless stations to compete for the transmit opportunity;

for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity;

wherein said transmit opportunities are reverse link transmit opportunities;

[A method according to claim 3] further comprising periodically reserving transmit opportunities for contention access by wireless stations not currently in competition for transmit opportunities, the reserved transmit opportunities being unavailable for allocation for transmission by wireless stations currently in competition for transmit opportunities.

18. (Original) A method according to claim 1 applied simultaneously for forward link and reverse link communication with a respective instance of the method being applied to forward link communications and reverse link communications.

19. (Original) A method according to claim 18 further comprising:

reserving reverse link transmit opportunities for wireless stations which are

simultaneously involved in reception of forward link traffic.

20. (Currently amended) A scheduler operable to implement the method of claim [1] 8.

21. (Currently amended) A base station comprising means for implementing the method of claim [1] 8.

22.(Currently amended) A base station controller comprising means for implementing the method of claim [1] 8.

23. (Currently amended) A MAC layer device comprising means for implementing the method of claim [1] 8.

24. (Original) An article of manufacture having computer readable program code means embodied therein for causing selection of one of a plurality of wireless base stations to be allocated a particular transmit opportunity, the computer readable code means in said article of manufacture comprising:

computer readable code means for maintaining a respective transaction length for each wireless station and maintaining a respective delay parameter for each wireless station indicative of how long since the wireless station was last allocated a transmit opportunity;

computer readable code means for selecting a group of said wireless stations to compete for the transmit opportunity;

computer readable code means for each of the group of said wireless stations, computing a respective transmit priority which is a function of the respective transaction length and the respective delay parameter; and

computer readable code means for selecting a wireless station in said group of said wireless stations with the highest transmit priority as the wireless station to be allocated the particular transmit opportunity.